

IN THE CLAIMS

Please amend the claims as follows:

1 – 21. (Cancelled)

22. (Currently amended) The method of claim [[21]] 24, wherein the providing of the substrate includes providing the substrate that already includes the thin-film solid-state battery including a cathode layer; an anode layer, and an electrolyte layer located between and electrically isolating the anode layer from the cathode layer, wherein the anode or the cathode or both include an intercalation material; and wherein the depositing of the plurality of layers includes depositing one or more layers to form the thin-film capacitor on a surface of the battery.

23. (Currently amended) The method of claim [[21]] 24, wherein the providing of the substrate includes providing the substrate that already includes one or more layers of the thin-film capacitor, and wherein the depositing of the plurality of layers includes depositing one or more layers to form the thin-film solid-state battery on a surface of the substrate including a cathode layer; an anode layer, and an electrolyte layer located between and electrically isolating the anode layer from the cathode layer, wherein the anode or the cathode or both include an intercalation material.

24. (Currently amended) ~~The method of claim 21, further comprising:~~ A method for making a combined battery and device apparatus, the method comprising:

providing a substrate;

successively depositing a plurality of thin-film layers on the substrate, the plurality of successively deposited layers forming a solid-state battery and a capacitor electrically connected to one another, the battery including a cathode layer; an anode layer, and an electrolyte layer located between and electrically isolating the anode layer from the cathode layer, wherein the anode or the cathode or both include an intercalation material;

attaching an integrated circuit to the combined battery and device apparatus; and electrically coupling the integrated circuit to the battery and to the capacitor.

25. (Currently amended) The method of claim [[21]] 24, further comprising:

mounting [[an]] the integrated circuit on the capacitor; ~~and~~
~~electrically connecting the integrated circuit to the battery and the capacitor.~~

26. (Currently amended) The method of claim [[21]] 24, further comprising:

depositing an insulating layer on the combined battery and capacitor; and
depositing a plurality of electrical traces on the insulating layer, wherein at least one of the plurality of electrical traces contacts an electrode of the battery through the insulating layer.

27. (Currently amended) ~~The method of claim 21, further comprising:~~ A method for making a combined battery and device apparatus, the method comprising:

providing a substrate;

successively depositing a plurality of thin-film layers on the substrate, the plurality of successively deposited layers forming a solid-state battery and a capacitor electrically connected to one another, the battery including a cathode layer; an anode layer, and an electrolyte layer located between and electrically isolating the anode layer from the cathode layer, wherein the anode or the cathode or both include an intercalation material;

depositing an insulating layer on the battery and the capacitor;
forming a plurality of electrical traces on the insulating layer;
supporting an integrated circuit on the battery and the capacitor;
electrically connecting a first one of the plurality of electrical traces to the cathode of the battery and the integrated circuit; and
electrically connecting a second one of the plurality of electrical traces to the anode of the battery and the integrated circuit.

28 – 30. (Cancelled)

31. (Currently amended) ~~The method of claim 21,~~ A method for making a combined battery and device apparatus, the method comprising:

providing a substrate;

successively depositing a plurality of thin-film layers on the substrate, the plurality of successively deposited layers forming a solid-state battery and a capacitor electrically connected to one another, the battery including a cathode layer; an anode layer, and an electrolyte layer located between and electrically isolating the anode layer from the cathode layer, wherein the anode or the cathode or both include an intercalation material, wherein the substrate includes an integrated circuit having an insulating layer on the integrated circuit, the insulating layer including a plurality of through vias, the method further comprising:

electrically connecting the cathode of the battery to the integrated circuit through a first one of plurality of through vias; and

electrically connecting the anode of the battery to the integrated circuit through a second one of plurality of through vias.

32. (Previously presented) A method for making a combined battery and device apparatus, the method comprising:

providing a substrate; and

depositing a plurality of thin-film layers on the substrate, the plurality of layers forming a solid-state battery and a capacitor electrically connected to one another, the battery including a cathode layer; an anode layer, and an electrolyte layer located between and electrically isolating the anode layer from the cathode layer, wherein the anode or the cathode or both include an intercalation material,

wherein the substrate includes an integrated circuit, the method further comprising:

depositing an insulating layer over the integrated circuit, the insulating layer including a plurality of through vias;

depositing a cathode-conductor of the battery on the insulating layer;

electrically connecting the cathode-conductor of the battery to the integrated circuit through a first one of plurality of through vias;

depositing the cathode layer of the battery on the cathode conductor;

depositing the electrolyte layer on the cathode layer;
depositing the anode on the electrolyte layer; and
electrically connecting the anode to the integrated circuit through a second one of plurality of through vias.

33. (Previously presented) A method for making a combined battery and device apparatus, the method comprising:

providing a substrate; and
successively depositing a plurality of thin-film layers on the substrate, the plurality of layers forming a solid-state battery and a capacitor electrically connected to one another, the battery including a cathode layer; an anode layer, and an electrolyte layer located between and electrically isolating the anode layer from the cathode layer, wherein the anode or the cathode or both include an intercalation material,

wherein the substrate includes an integrated circuit, and wherein the successively depositing of the plurality of thin-film layers further includes:
depositing an insulating layer on the integrated circuit, the insulating layer including a plurality of through vias;

depositing a cathode-conductor of the battery on a face of the integrated circuit opposite the insulating layer;

electrically connecting the cathode-conductor of the battery to the integrated circuit through a first one of plurality of through vias;

depositing the cathode layer of the battery on the cathode conductor;

depositing the electrolyte layer on the cathode layer;

depositing the anode on the electrolyte layer; and

electrically connecting the anode to the integrated circuit through a second one of plurality of through vias.

34. (Previously presented) A method for making a combined battery and device apparatus, the method comprising:

providing a substrate; and

depositing a plurality of thin-film layers on the substrate, the plurality of layers forming a solid-state battery and a capacitor electrically connected to one another, the battery including a cathode layer; an anode layer, and an electrolyte layer located between and electrically isolating the anode layer from the cathode layer, wherein the anode or the cathode or both include an intercalation material, further comprising:

depositing an insulating layer on the battery that acts as a passivation layer that protects the anode from environmental corrosion; and

depositing a conductive layer to form the capacitor and a plurality of electrical traces on the insulating layer, wherein at least one of the plurality of electrical traces contacts an electrode of the battery through the insulating layer.

35. (Currently amended) The method of claim [[21]] 24, further comprising:

forming the substrate into a curved shape having a convex face and a concave face; and
locating the battery and the capacitor on the concave face.

36. (Currently amended) The method of claim [[21]] 24, wherein the substrate comprises a polymer having a melting point substantially below 700 degrees centigrade, and the method includes avoiding melting the substrate.

37. (Cancelled)

38. (Previously presented) A method for making a combined battery and device apparatus, the method comprising:

providing a thin-film solid-state battery on a substrate, the battery including a cathode layer; an anode layer, and an electrolyte layer located between and electrically isolating the anode layer from the cathode layer, wherein the anode or the cathode or both include an intercalation material; and

depositing one or more layers of a thin-film capacitor on the substrate beside the battery, further comprising:

attaching an integrated circuit to the combined battery and device apparatus; and

electrically coupling the integrated circuit to the battery and to the capacitor.

39. (Previously presented) A method for making a combined battery and device apparatus, the method comprising:

providing a thin-film solid-state battery on a substrate, the battery including a cathode layer; an anode layer, and an electrolyte layer located between and electrically isolating the anode layer from the cathode layer, wherein the anode or the cathode or both include an intercalation material; and

depositing one or more layers of a thin-film capacitor on the substrate beside the battery;

mounting an integrated circuit on the capacitor; and

electrically connecting the integrated circuit to the battery and the capacitor.

40. (Previously presented) A method for making a combined battery and device apparatus, the method comprising:

providing a thin-film solid-state battery on a substrate, the battery including a cathode layer; an anode layer, and an electrolyte layer located between and electrically isolating the anode layer from the cathode layer, wherein the anode or the cathode or both include an intercalation material; and

depositing one or more layers of a thin-film capacitor on the substrate beside the battery further comprising:

depositing an insulating layer on the battery and the capacitor; and

depositing a plurality of electrical traces on the insulating layer, wherein at least one of the plurality of electrical traces contacts an electrode of the battery through the insulating layer.

41. (Previously presented) A method for making a combined battery and device apparatus, the method comprising:

providing a thin-film solid-state battery on a substrate, the battery including a cathode layer; an anode layer, and an electrolyte layer located between and electrically isolating the anode layer from the cathode layer, wherein the anode or the cathode or both include an intercalation material; and

depositing one or more layers of a thin-film capacitor on the substrate beside the battery, further comprising:

depositing an insulating layer on the battery and the capacitor;
forming a plurality of electrical traces on the insulating layer;
supporting an integrated circuit on the battery and the capacitor;
electrically connecting a first one of the plurality of electrical traces to the cathode of the battery and the integrated circuit; and
electrically connecting a second one of the plurality of electrical traces to the anode of the battery and the integrated circuit.

42 - 54. (Cancelled)

55. (Currently amended) The method of claim [[21]] 24, wherein the substrate comprises a polymer having a melting point substantially below 700 degrees centigrade.

56. (Currently amended) The method of claim [[21]] 24, wherein the substrate comprises a metal foil.

57. (Currently amended) The method of claim [[21]] 24, wherein the substrate comprises a metal foil having an insulative layer between the metal foil and the first conductive layer adjacent to a first surface area of the substrate's major surface area.

58. (Currently amended) The method of claim [[21]] 24, wherein the substrate comprises a ceramic.

59. (Currently amended) The method of claim [[21]] 24, wherein the substrate comprises a glass.

60. (Currently amended) The method of claim [[21]] 24, further comprising shaping the substrate to a shape having a convex face and a concave face, and having the battery located on the concave face.

61. (Currently amended) The method of claim [[30]] 63, wherein the substrate has a curved shape having a convex face and a concave face, and the battery is located on the concave face.

62. (Currently amended) The method of claim [[37]] 63, further comprising shaping the substrate to a shape having a convex face and a concave face, and having the battery located on the concave face.

63. (Currently amended) ~~The method of claim 28, further comprising:~~

A method for making a combined battery and device apparatus, the method comprising:
providing a thin-film solid-state battery including a cathode layer; an anode layer, and an electrolyte layer located between and electrically isolating the anode layer from the cathode layer, wherein the anode or the cathode or both include an intercalation material;

successively depositing a plurality of thin-film layers to form a thin-film capacitor on a surface of the battery;

mounting an integrated circuit on the capacitor; and

electrically connecting the integrated circuit to the battery and the capacitor.

64. (Currently amended) ~~The method of claim 28, further comprising:~~

A method for making a combined battery and device apparatus, the method comprising:
providing a thin-film solid-state battery including a cathode layer; an anode layer, and an electrolyte layer located between and electrically isolating the anode layer from the cathode layer, wherein the anode or the cathode or both include an intercalation material;

successively depositing a plurality of thin-film layers to form a thin-film capacitor on a surface of the battery;

depositing an insulating layer on the combined battery and device; and

depositing a plurality of electrical traces on the insulating layer, wherein at least one of the plurality of electrical traces contacts an electrode of the battery through the insulating layer.

65. (Currently amended) ~~The method of claim 29, further comprising:~~

A method for making a combined battery and device apparatus, the method comprising:
providing a thin-film capacitor;

successively depositing a plurality of thin-film layers to form a thin-film solid-state battery on a surface of the capacitor, the battery including a cathode layer; an anode layer, and an electrolyte layer located between and electrically isolating the anode layer from the cathode layer, wherein the anode or the cathode or both include an intercalation material;

mounting an integrated circuit on the battery; and

electrically connecting the integrated circuit to the battery and the capacitor.

66. (Currently amended) ~~The method of claim 29, further comprising:~~

A method for making a combined battery and device apparatus, the method comprising:
providing a thin-film capacitor;

successively depositing a plurality of thin-film layers to form a thin-film solid-state battery on a surface of the capacitor, the battery including a cathode layer; an anode layer, and an electrolyte layer located between and electrically isolating the anode layer from the cathode layer, wherein the anode or the cathode or both include an intercalation material;

depositing an insulating layer on the combined battery and device; and

depositing a plurality of electrical traces on the insulating layer, wherein at least one of the plurality of electrical traces contacts an electrode of the battery through the insulating layer.

67. (Previously presented) A method for making a combined battery and device apparatus, the method comprising:

providing a substrate having a major surface area;

depositing a first conductive layer on a first surface area of the substrate's major surface area;

successively depositing onto the first conductive layer a plurality of thin-film layers to form a battery that includes a cathode layer; an anode layer, and an electrolyte layer located between and electrically isolating the anode layer from the cathode layer, wherein the anode or the cathode or both include an intercalation material, the battery disposed such that either the cathode layer or the anode layer is in electrical contact with the first conductive layer; and

depositing an electrical circuit, at least a portion of which is on the battery, wherein the electrical circuit includes a thin-film capacitor successively deposited as a plurality of thin-film layers on a surface of the substrate beside the battery;

mounting an integrated circuit on the capacitor; and

electrically connecting the integrated circuit to the battery and the capacitor.

68. (Previously presented) A method for making a combined battery and device apparatus, the method comprising:

providing a substrate having a major surface area;

depositing a first conductive layer on a first surface area of the substrate's major surface area;

successively depositing onto the first conductive layer a plurality of thin-film layers to form a battery that includes a cathode layer; an anode layer, and an electrolyte layer located between and electrically isolating the anode layer from the cathode layer, wherein the anode or the cathode or both include an intercalation material, the battery disposed such that either the cathode layer or the anode layer is in electrical contact with the first conductive layer; and

depositing an electrical circuit, at least a portion of which is on the battery, wherein the electrical circuit includes a thin-film capacitor successively deposited as a plurality of thin-film layers on a surface of the substrate beside the battery;

depositing an insulating layer on the battery; and

depositing a plurality of electrical traces on the insulating layer, wherein at least one of the plurality of electrical traces contacts an electrode of the battery through the insulating layer.

69. (Currently amended) The method of claim [[30]] 65, wherein the substrate has a curved shape having a convex face and a concave face, and the battery is located on the convex face.

70. (Previously presented) The method of claim 32, wherein the substrate has a curved shape having a convex face and a concave face, and the battery is located on the concave face.

71. (Previously presented) The method of claim 33, wherein the substrate has a curved shape having a convex face and a concave face, and the battery is located on the concave face.

72. (Previously presented) The method of claim 33, wherein the substrate comprises a polymer having a melting point substantially below 700 degrees centigrade.

73. (Previously presented) The method of claim 34, further comprising:
mounting an integrated circuit on the capacitor; and
electrically connecting the integrated circuit to the battery and the capacitor.

74. (Previously presented) The method of claim 34, further comprising:
depositing an insulating layer on the combined battery and device; and
depositing a plurality of electrical traces on the insulating layer, wherein at least one of the plurality of electrical traces contacts an electrode of the battery through the insulating layer.

75. (Previously presented) The method of claim 34, wherein the substrate has a curved shape having a convex face and a concave face, and the battery is located on the concave face.

76. (Previously presented) The method of claim 34, wherein the substrate comprises a polymer having a melting point substantially below 700 degrees centigrade.

77. (Previously presented) A method for making a combined battery and device apparatus, the method comprising:

providing a thin-film solid-state battery on a substrate, the battery including a cathode layer; an anode layer, and an electrolyte layer located between and electrically isolating the

anode layer from the cathode layer, wherein the anode or the cathode or both include an intercalation material; and

successively depositing a plurality of thin-film layers of a thin-film capacitor on the substrate beside the battery;

mounting an integrated circuit on the capacitor; and

electrically connecting the integrated circuit to the battery and the capacitor.

78. (Previously presented) A method for making a combined battery and device apparatus, the method comprising:

providing a thin-film solid-state battery on a substrate, the battery including a cathode layer; an anode layer, and an electrolyte layer located between and electrically isolating the anode layer from the cathode layer, wherein the anode or the cathode or both include an intercalation material; and

successively depositing a plurality of thin-film layers of a thin-film capacitor on the substrate beside the battery;

depositing an insulating layer on the combined battery and device; and

depositing a plurality of electrical traces on the insulating layer, wherein at least one of the plurality of electrical traces contacts an electrode of the battery through the insulating layer.

80. (Previously presented) The method of claim 38, wherein the substrate has a curved shape having a convex face and a concave face, and the battery is located on the concave face.

81. (Previously presented) The method of claim 38, wherein the substrate comprises a polymer having a melting point substantially below 700 degrees centigrade.

82. (Previously presented) The method of claim 39, wherein the substrate has a curved shape having a convex face and a concave face, and the battery is located on the concave face.

83. (Previously presented) The method of claim 39, wherein the substrate comprises a polymer having a melting point substantially below 700 degrees centigrade.

84. (Previously presented) The method of claim 40, further comprising:
mounting an integrated circuit on the capacitor; and
electrically connecting the integrated circuit to the battery and the capacitor.
85. (Previously presented) The method of claim 40, wherein the substrate has a curved shape having a convex face and a concave face, and the battery is located on the concave face.
86. (Previously presented) The method of claim 40, wherein the substrate comprises a polymer having a melting point substantially below 700 degrees centigrade.
87. (Previously presented) The method of claim 41, wherein the substrate has a curved shape having a convex face and a concave face, and the battery is located on the concave face.
88. (New) The method of claim 24, wherein the integrated circuit includes a recharging circuit.
89. (New) The method of claim 31, wherein the integrated circuit includes a recharging circuit.
90. (New) The method of claim 24, further comprising depositing an encapsulation layer on the combined battery and device apparatus.
91. (New) The method of claim 31, further comprising depositing an encapsulation layer on the combined battery and device apparatus.